Chapter 5. Oak Woodland Impact Assessment

This chapter summarizes the existing conditions of the Oregon White Oak woodland proposed to be impacted, a general assessment of impacts to Oak woodlands and functions related to the proposed project, and minimization efforts used to reduce natural resource impacts.

5.1 Existing Conditions of Oregon White Oak to be Impacted

WSDOT has taken appropriate and practicable steps to avoid and minimize adverse impacts to wetland resources, streams, riparian areas, and associated buffers, and mature upland forests. Total avoidance was not possible due to constraints associated with safety and design-guidelines, the close proximity of resources to existing highway embankments, and the linear nature of transportation projects. Several alignments and stormwater designs with varying levels of Oak Woodland impacts were evaluated during the development of the project. The final proposed alignment and stormwater design affects the least amount of natural, cultural, and scenic resources.

The affected stand of oaks (approximately 2.25 acres) is located on the periphery of a very large Oregon white oak forest association (over 1,600 acres) in Southeast Clark County and Southwest Skamania County (see figures 4 and 5). Nearly all of the forest association has been approved for acquisition and/or designation as the 1,656 acre Washougal Oaks Natural Area Preserve (NAP) and Resource Conservation Area under the Natural Area Preserve program of the Washington Department of Natural Resources. Per a publication by the Washington Natural Heritage Program, the core 226 acres of the NAP were designed to protect the largest contiguous, unfragmented stand of Oregon white oak/oval-leaf viburnum-poision oak forest association found in the area, adjoining ravines associated with Lawton Creek, and smaller stands of oak located in and adjacent to the ravines. The supporting soil type is predominately mapped as Lauren gravelly loam. The portion of the Oregon white oak/oval-leaf viburnum-poision oak forest association within the Washougal Oaks NAP is considered one of the two best remaining examples in western Washington and is ranked as a G1S1, Priority 1 habitat by the Washington DNR *Natural Heritage Plan 2007*. This association prefers dry to very dry, often stony or shallow bedrock soils and are found on moderate to steep slopes. All of the NAP and Conservation Area is located within Clark County. Oregon White Oak woodlands are categorized by the Washington Department of Fish and Wildlife as a priority habitat; they are not currently listed as “Threatened” or “Endangered” by State or Federal resource agencies, and management of these priority habitats occurs at the county level through the WA Growth Management Act.

The 2.25 acres of Oregon white oak forest association proposed to be affected by the project are outside of the final approved boundaries of the Natural Area Preserve and Conservation Area and are completely within Skamania County. Field reviews indicate that this narrow, linear band of oak (150-200 feet in width and 800 feet in length per GIS measurements) is an Oregon white oak-Douglas fir/snowberry association (understory primarily common snowberry and sword fern), ranked as a G4S3, Priority 3 habitat by the Washington DNR. This association prefers moderately dry to dry, gravelly or shallow bedrock soils on moderate or

flatter slopes, although this association may occur on a variety of aspects and slopes. This particular stand occurs on Skelida silt loam, 5-15% slopes as does the proposed 12 acre Cleveland Oak Woodland mitigation site located 1.5 miles northeast of the impact area. The stand proposed to be affected by highway realignment has undergone significant fragmentation since the 1800's as a result of rural agricultural development associated with the historic Mt. Pleasant community and has been physically isolated from the larger Oregon white oak forest association to the south and southwest by the existing highway (alignment constructed as early as 1908), Marble Road, private driveways and other historic road grades. Oak woodlands that may have been located north of the historic SR-14 alignment have undergone significant clearing to develop the present field and woodlot pattern evident on the landscape today. The stand contains sections of undisturbed common snowberry understory as well as large areas of the invasive Himalayan blackberry. Within the 2.25 acres of potential impact, WSDOT has identified 9 Oregon white oaks with a DBH 30 inches or greater. 75 percent of potentially impacted oaks have a DHH of less than 20 inches.

Figure 4. Existing Oregon White Oak habitat at Marble Road

Clearing and removal portions of the oak woodland will affect some attributes of wildlife habitat, and may modify or remove potential nesting or breeding habitat for sensitive terrestrial species. Additionally, the removal of trees, many of which cannot be left in place as habitat (snags or fallen trees), will impact potential denning and foraging habitat and food (insects, spiders, acorns, fungi) abundance. Vegetation removal also has the ability to impact moist surface microclimates, having detrimental effects to surface-dwelling amphibians and invertebrates reliant on cool, moist conditions. The proposed clearing limits do not contain documented known nesting locations, and will not destroy or modify designated critical habitat. With the implementation of minimization and/or avoidance measures (i.e. potential seasonal restriction of disturbance activities outside of the species' nesting/rearing season), project activities are expected to have insignificant impacts to sensitive species.

Figure 5. Existing Oregon White Oak habitat at Marble Road showing scale.